

Supporting Information

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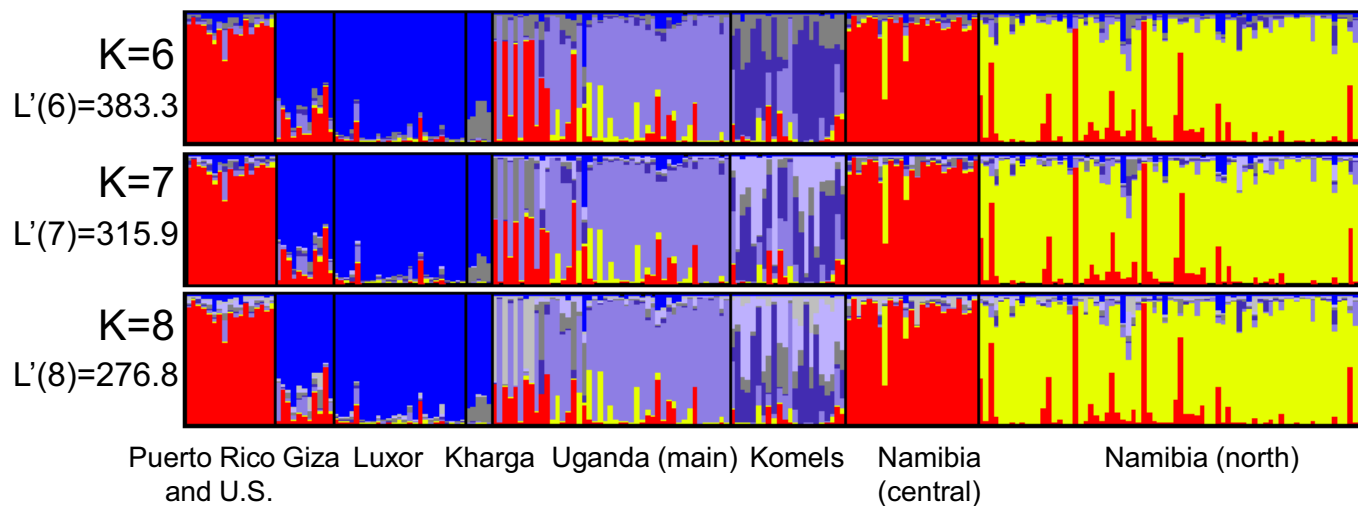


Fig. S1. STRUCTURE results as in Fig. 2 for higher K . $L'(K)$ defined as $L(K)-L(K-1)$ where $L(K)$ is the average of the mean \ln likelihood across all 10 runs for a given K . $L'(K) = 1499.4$, 1214.3 , and 646.7 for $K = 3, 4$, and 5 , respectively.

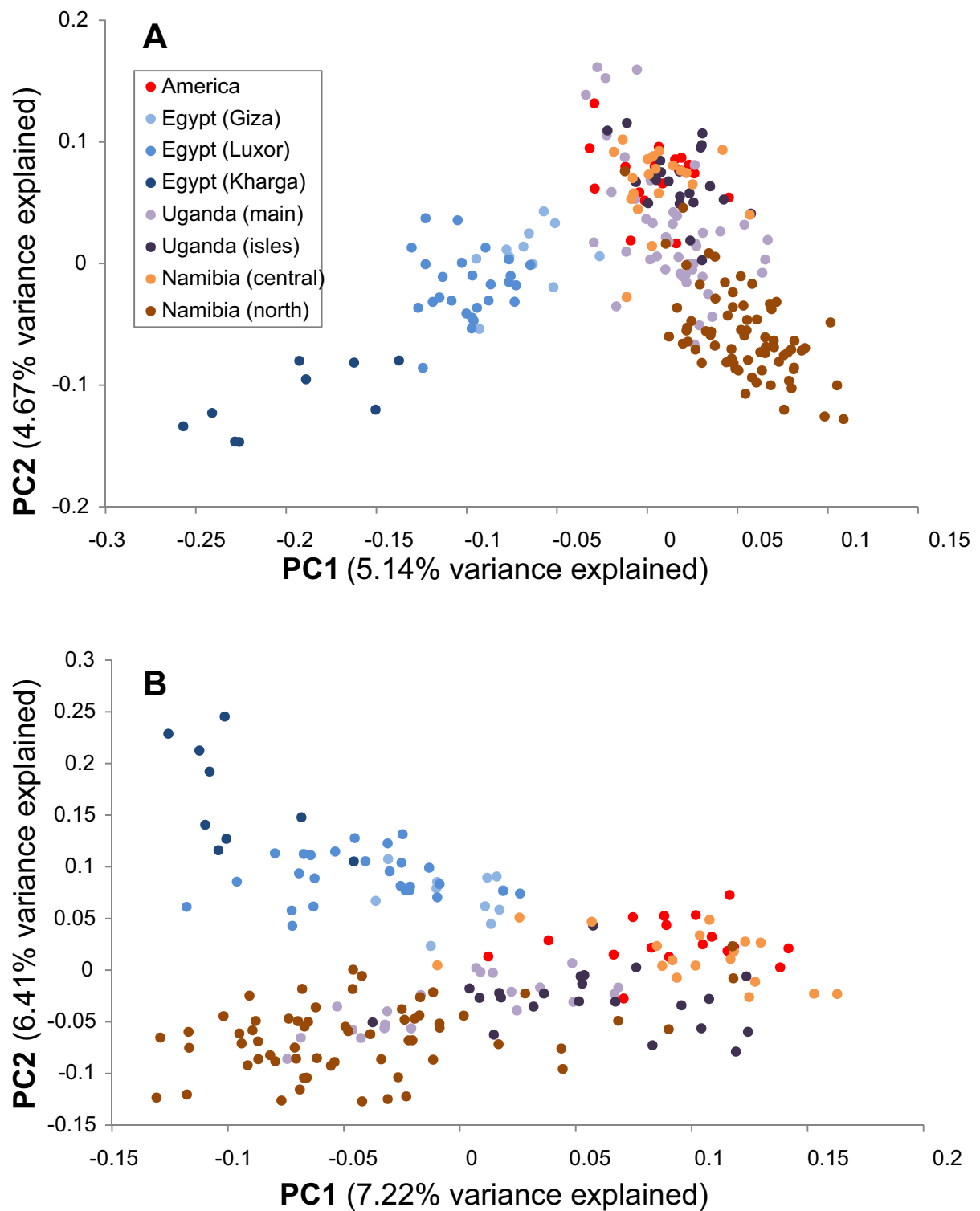


Fig. S2. Principal component analysis of African village dogs (all including admixed individuals) and American dogs. (A) PCA with the 89 microsatellite loci ($n = 227$). (B) PCA with the 300 SNP loci ($n = 186$).

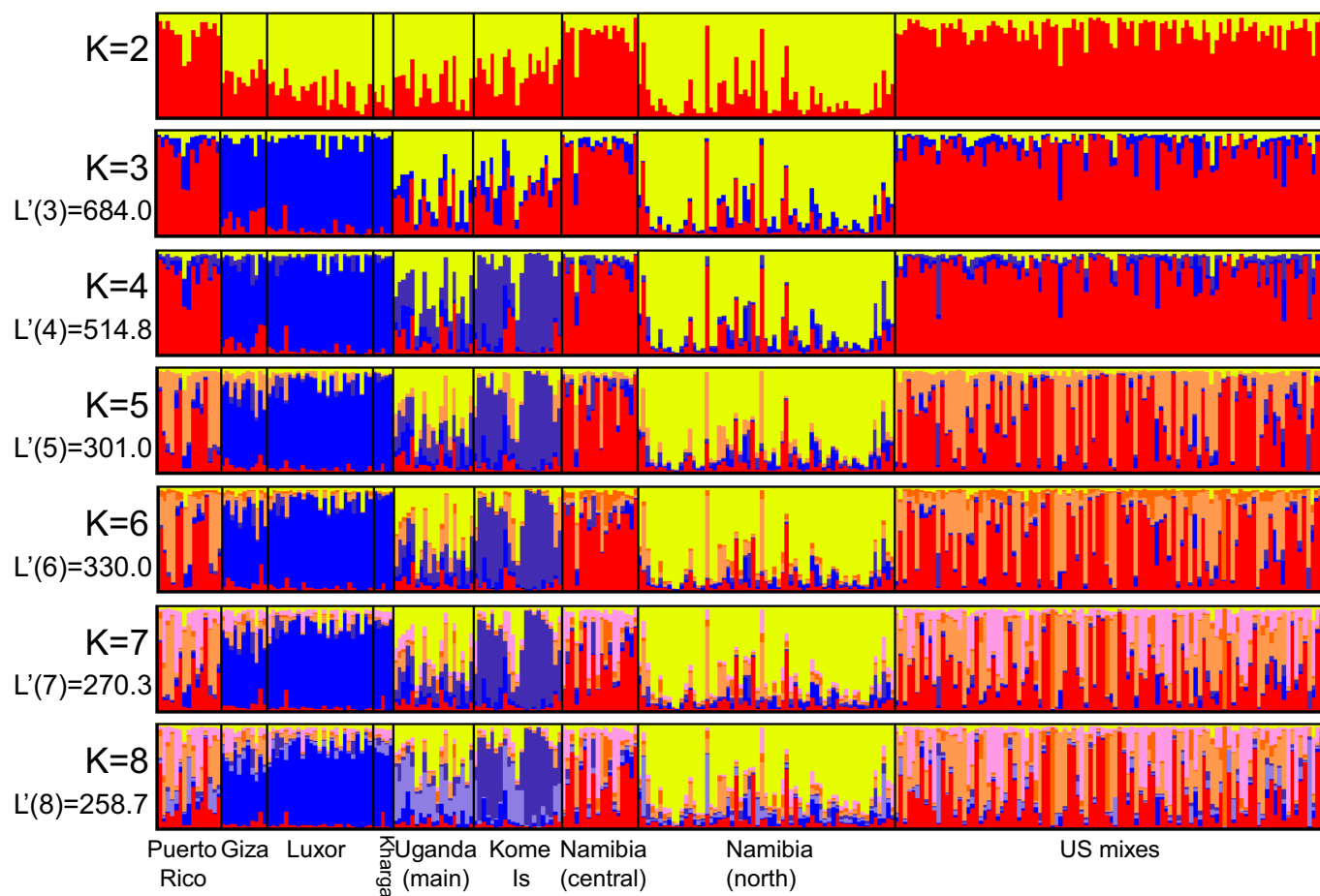


Fig. S3. STRUCTURE analysis of 184 village dogs and 102 complex mixed breed dogs from the United States at 300 SNP loci.

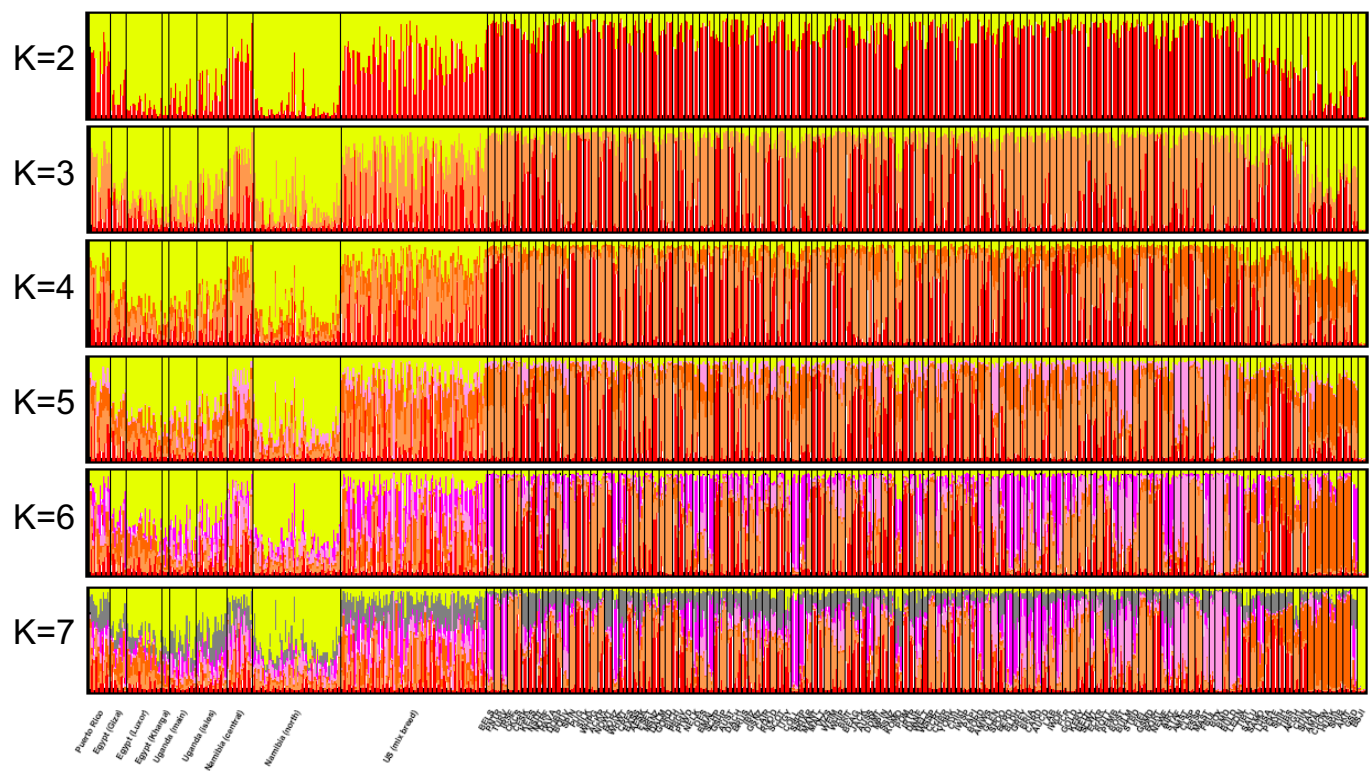


Fig. S4. STRUCTURE analysis of village dogs and dogs from 126 dog breeds using 300 SNP loci. An African cluster is apparent at $K = 2$ while subsequent clusters detect structure between breed dog groups. $L'(K)$ declines sharply beyond $K = 6$ ($L'(K) = 2280.5, 1899.8, 1638.5, 1609.2$, and 1122.0 for $K = 3-7$, respectively).

African village + breed dog microsatellite PCA

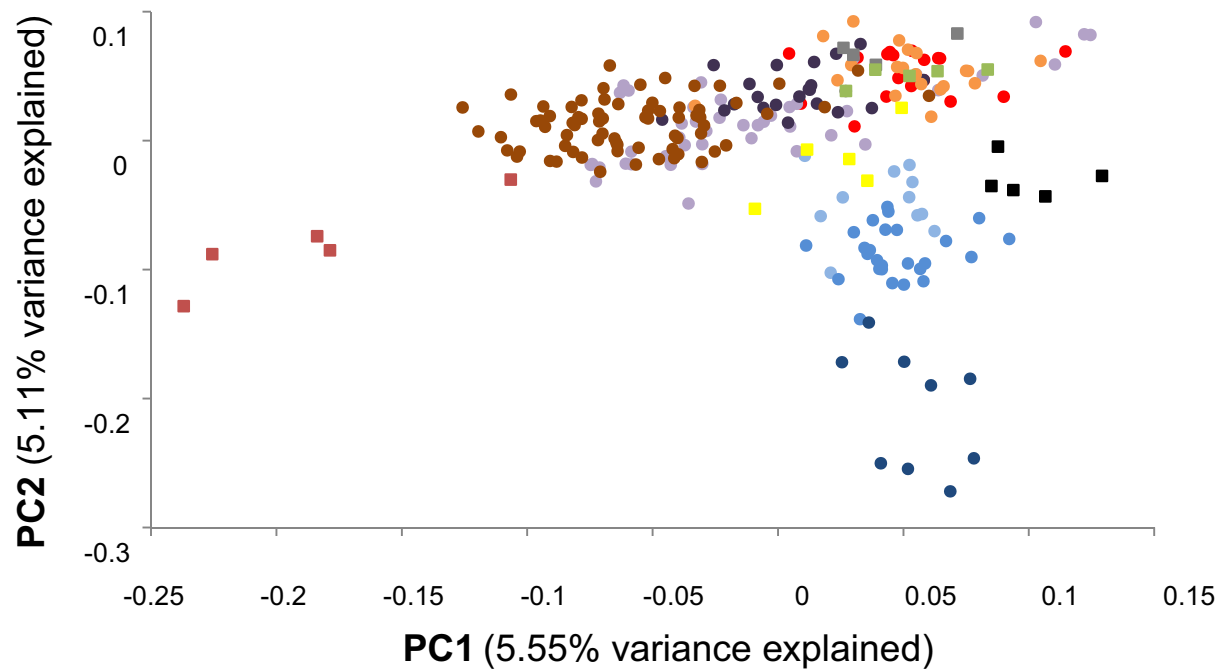


Fig. S5. Principal component analysis of village dogs and dogs from five putatively African and Middle Eastern breeds across 89 microsatellite markers in 227 village dogs and 24 breed dogs.

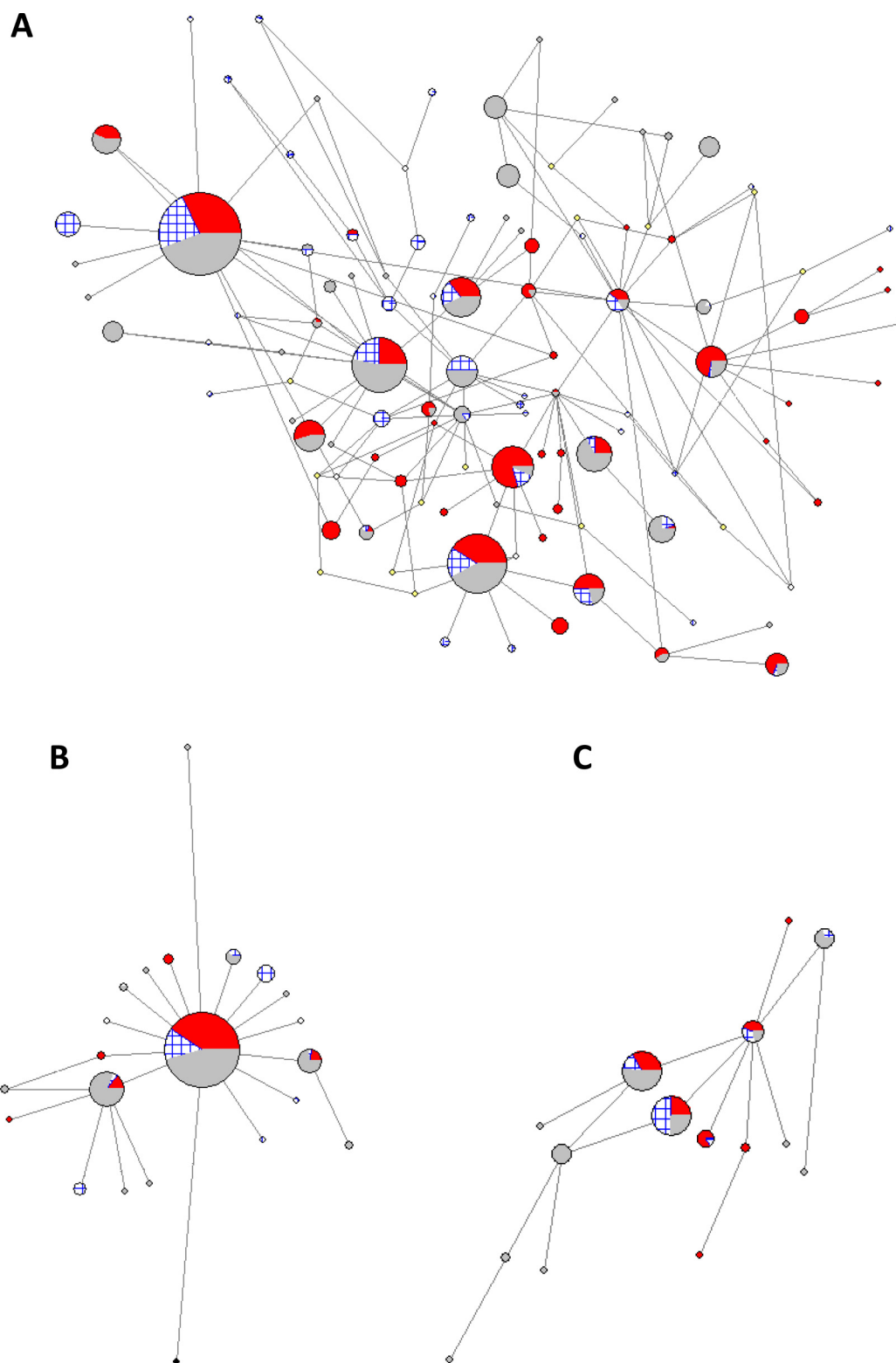


Fig. S6. Haplotype network graphs of 582-bp region excluding indels for mtDNA clades A–C. Data from (6, 10) and this study. Red = Africa, blue hatching = East Asia; gray = other. Area of node proportional to number of dogs with that haplotype.

Country	Region	Location name	N	N (nonrel)	N (auto)	Mal	Fem	I/?/M	Location	Elev	Date	mtDNA haplotypes
Namibia	north	Oshivelo	4	4	4	2	2	2/0/2	18° 36.957' S, 17° 09.995' E	3627'	08/23/07	vilA13 (2), vilB1b, vilC5
Namibia	north	Oshikango	6	6	6	3	3	6/0/0	18° 36.957' S, 17° 09.995' E	3626'	08/24/07	vilA11a, vilA13, vilA15 (3), vilB1b
Namibia	north	Onhuno	6	6	4	4	2	3/1/0	17° 30.905' S, 15° 54.126' E	3629'	08/24/07	vilA2, vilA13 (2), vilA17, vilB1b (2)
Namibia	north	Ongha	6	6	5	6	0	4/0/1	17° 38.623' S, 15° 55.651' E	3615'	08/24/07	vilA7, vilA11a, vilA16, vilA18, vilB1b, vilB1a
Namibia	north	Indiangungu	6	5	4	6	0	4/0/0	17° 47.694' S, 16° 00.280' E	3650'	08/24/07	vilA7, vilA11a, vilA18, vilA19, vilB3a
Namibia	north	Ondandwa	6	6	6	2	4	5/1/0	17° 54.945' S, 15° 58.605' E	3595'	08/24/07	vilA11a, vilA13, vilA15, vilA16, vilA20, vilB3b
Namibia	north	Olund	6	6	4	3	3	2/1/1	17° 55.261' S, 16° 0.123' E	3573'	08/25/07	vilA5, vilA6, vilA14 (2), vilA19 (2)
Namibia	north	Omaarara	7	7	4	5	2	4/0/0	17° 51.249' S, 15° 52.894' E	3606'	08/25/07	vilA5 (3), vilA11a, vilA13, vilA19 (2)
Namibia	north	Okanbjengedhi	11	11	7	6	5	6/0/1	17° 47.145' S, 15° 43.760' E	3597'	08/25/07	vilA11a (3), vilA13 (2), vilA15, vilA20, vilA21, vilB1b (2), vilC5
Namibia	north	Oshikuku	6	6	4	4	2	3/1/0	17° 39.419' S, 15° 29.081' E	3606'	08/25/07	vilA11a, vilA20, vilA22 (2), vilB1b (2)
Namibia	north	Omavela	5	5	5	3	2	5/0/0	17° 42.038' S, 15° 43.372' E	3588'	08/25/07	vilA11a, vilA13, vilA23, vilB1b, vilB3a
Namibia	north	Endola	7	7	6	5	2	6/0/0	17° 35.841' S, 15° 43.313' E	3630'	08/26/07	vilA5, vilA11a, vilA13 (3), vilA17, vilA20
Namibia	north	Onyvulae	9	9	8	9	0	8/0/0	18° 04.315' S, 16° 31.653' E	3656'	08/26/07	vilA7, vilA11a (3), vilA13 (2), vilA22, vilA24, vilA34
Namibia	north	Onyati	3	3	2	1	2	2/0/0	18° 13.108' S, 16° 24.927' E	3609'	08/26/07	vilA2 (3)
Namibia	north	Cham-Cham	5*	4	5	2	2	1/3/0	18° 28.495' S, 16° 57.160' E	3603'	08/26/07	vilA13 (2), vilA16, vilC6
Namibia	central	Tsumeb	11	11	9	7	4	0/1/8	19° 14.942' S, 17° 42.197' E	4223'	08/26/07	vilA13 (2), vilA14 (3), vilB1b (2), vilB1a, vilC2 (3)
Namibia	central	Grootfontaine	12	11	11	6	6	0/0/11	19° 35.234' S, 18° 06.170' E	4693'	08/27/07	vilA7, vilA11a (4), vilA13, vilA16 (4), vilC3a
America	Indiana	Tippecanoe Cty Humane Society	1	1	1	0	1	0/0/1	40° 24.089' N, 86° 53.753' W	604'	08/23/07	vilA27
America	Virginia	Norfolk SPCA	1	1	1	1	0	0/0/1	36° 51.190' N, 76° 14.878' W	23'	07/05/07	vilB1b
America	Puerto Rico	Albergue de Mayaguez	5	5	5	4	1	0/0/5	18° 12.760' N, 67° 7.708' W	948'	06/29/07	vilA13 (2), vilA27, vilA28, vilB1b
America	Puerto Rico	Albergue de Ponce	11	10	11	4	7	0/0/10	18° 00.356' N, 66° 38.911' W	94'	06/30/07	vilA2 (2), vilA11a (3), vilA16, vilA25, vilA26, vilB1b (2)

I/?/M denotes number of indigenous (<25% admixed), uncertain (25–60% admixed), and admixed (>60% admixed) dogs (unrelated genotyped dogs only)
 N (nonrel) denotes number of dogs sequenced across D-loop, excluding relatives; N (auto) denotes number of dogs with SNP and/or microsatellite genotyping
 *Sex was not recorded for one dog from Cham-Cham

	Giza	Kharga	Luxor	NA_cent	NA_north	UG_isles	UG_main	America
Giza	—							
Kharga	7.79%	—						
Luxor	0.57%	7.35%	—					
NA_cent	2.22%	12.40%	4.42%	—				
NA_north	2.85%	11.01%	3.90%	3.71%	—			
UG_isles	4.35%	13.24%	5.62%	4.97%	5.18%	—		
UG_main	1.62%	10.33%	3.22%	2.50%	2.37%	2.47%	—	
America	2.38%	12.73%	4.13%	0.25%	3.55%	4.33%	2.22%	—

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Table S4. Haplotype diversity in various regions in Africa (Pires et al., 2006 and this study) and East Asia (Savolainen et al., 2002).

Region	# Samples	# Haplotypes	Area 10 ³ km ²
Egypt	42	18	1002
NW Africa	29	15	163
Uganda	148	23	241
Namibia (north)	91	22	824
Japan	96	26	378
Sichuan	48	11	485
Tibet	23	13	1230
China (Non-specified)	22	10	9598
Shanxi	20	12	157
Korea	11	5	220
Thailand	10	9	513
Guangxi	8	6	237
Indonesia	7	5	1905
Liaoning	6	5	146
Mongolia	2	2	1564
Cambodia	2	2	181
Anhui	2	1	139
New Guinea	1	1	463
Philippines	1	1	300
Vietnam	1	1	332

Table S5. Microsatellite markers used in this study (see Parker et al., 2004, 2007)

M#	Marker name	Chrom number	Dye label*	Annealing temp	MgCl ₂ conc	Electrophoresis conditions [†]	Notes
1	REN285G14	1	PET	55	2	2ul,multiplexed	
2	C01.673	1	VIC	58	1.5	2 ul, multiplexed	
3	REN112I02	1	PET	58	1.5	2 ul, multiplexed	
4	REN172C02	1	6-FAM	55	2	2 ul, multiplexed	
5	FH2793	1	6-FAM	58	1.5	2 ul, multiplexed	
6	REN143K19	1	6-FAM	55	2	2 ul, multiplexed	
7	FH2890	2	VIC	55	2	2 ul, multiplexed	
8	C02.466	2	NED	58	1.5	2 ul, multiplexed	
9	C02.894	2	PET	55	1.5	2 ul, multiplexed	
11	FH2895	3	PET	58	1.5	2 ul, multiplexed	removed (missingness)
12	REN157C08	3	VIC	55	2	2 ul, multiplexed	
13	C03.445	3	NED	55	1.5	2 ul, multiplexed	
14	FH2732	4	6-FAM	58	1.5	2 ul, multiplexed	
15	FH2776	4	VIC	58	1.5	2 ul, multiplexed	
16	REN160J02	4	PET	58	1.5	2 ul, multiplexed	
17	REN262N08	4	6-FAM	55	2	5–10 ul	
18	REN92G21	5	6-FAM	55	1.5	2 ul, multiplexed	removed (het deficit)
19	REN285I23	5	PET	55	2	2 ul, multiplexed	
20	C05.414	5	PET	55	1.5	2 ul, multiplexed	
21	FH2752	6	6-FAM	58	1.5	2 ul, multiplexed	
22	REN210I14	6	NED	55	2	2 ul, multiplexed	
23	REN37H09	6	PET	58	1.5	2 ul, multiplexed	
24	REN97M11	7	6-FAM	55	2	2 ul, multiplexed	
25	REN286L19	7	VIC	58	1.5	2 ul, multiplexed	
26	FH2860	7	6-FAM	55	2	2 ul, multiplexed	
27	REN204K13	8	NED	55	2	2 ul, multiplexed	
28	C08.373	8	VIC	58	1.5	2 ul, multiplexed	
29	C08.618	8	NED	55	2	2 ul, multiplexed	
30	C09.173	9	NED	58	1.5	2 ul, multiplexed	
31	C09.474	9	6-FAM	55	2	2 ul, multiplexed	
32	FH2885	9	VIC	55	2	2 ul, multiplexed	
33	C10.781	10	6-FAM	55	2	2 ul, multiplexed	
34	REN73F08	10	VIC	55	2	2 ul, multiplexed	
35	REN154G10	10	NED	55	2	2 ul, multiplexed	
36	REN164B05	11	PET	55	2	2 ul, multiplexed	
37	FH2874	11	VIC	55	2	2 ul, multiplexed	
38	C11.873	11	VIC	58	1.5	2 ul, multiplexed	
40	REN213F01	12	VIC	55	2	2 ul, multiplexed	
41	REN208M20	12	6-FAM	58	1.5	2 ul, multiplexed	
42	REN94K11	12	VIC	55	2	2 ul, multiplexed	
44	REN286P03	13	PET	55	1.5	2 ul, multiplexed	
45	C13.758	13	6-FAM	55	2	2 ul, multiplexed	
46	C14.866	14	VIC	55	2	2 ul, multiplexed	
47	FH3072	14	NED	55	2	2 ul, multiplexed	
48	FH3802	15	PET	55	2	2 ul, multiplexed	
49	REN06C11	15	PET	55	1.5	2 ul, multiplexed	
50	REN144M10	15	6-FAM	58	1.5	2 ul, multiplexed	
51	REN85N14	16	6-FAM	58	1.5	2 ul, multiplexed	
52	FH3096	16	NED	55	2	2 ul, multiplexed	
53	C17.402	17	NED	58	1.5	2 ul, multiplexed	
54	REN50B03	17	PET	58	1.5	2 ul, multiplexed	
55	REN112G10	17	VIC	55	2	2 ul, multiplexed	
56	REN186N13	18	VIC	55	1.5	2 ul, multiplexed	
57	FH2795	18	NED	55	1.5	2 ul, multiplexed	
58	C18.460	18	PET	58	1.5	2 ul, multiplexed	
59	FH2783	19	NED	55	2	2 ul, multiplexed	
60	REN91I14	19	VIC	55	1.5	2 ul, multiplexed	
61	REN274F18	19	NED	58	1.5	2 ul, multiplexed	
62	FH2887	20	6-FAM	55	2	2 ul, multiplexed	
63	FH3109	20	PET	55	1.5	2 ul, multiplexed	
64	REN293N22	20	VIC	55	1.5	2 ul, multiplexed	
65	FH2914	21	VIC	55	2	2 ul, multiplexed	
66	FH3069	21	NED	55	2	2 ul, multiplexed	
67	REN49F22	22	PET	55	2	5–10 ul	removed (missingness)

[†]Multiplexed markers were combined into groups of 2 to 4 different dyes colors post PCR.